

## ABSTRACT OF THE DISCLOSURE

An apparatus for X-ray analysis comprises (1)a focusing optical system including an X-ray source, a specimen table and 5 a two-dimensional X-ray detector, (2)a device for shifting the angle of incidence of X-rays relative to a specimen supported by the specimen table, (3)a device for moving the two-dimensional X-ray detector in parallel with a central axis of rotation of the specimen and (4)a mask arranged in front of 10 the two-dimensional X-ray detector. The mask has a slit arranged on a line intersecting a plane rectangularly intersecting said central axis of rotation of the specimen and containing a central optical axis of incident X-rays. The mask having the slit is driven to move in parallel with the axis of 15 rotation of the specimen so that a measuring operation can be conducted on the basis of the focusing method by using the two-dimensional X-ray detector. It is possible to conduct a measuring operation on the basis of the parallel beam method when the mask is removed from the front of the two-dimensional 20 X-ray detector and a parallel X-ray beam is made to strike the specimen. Thus, with an apparatus for X-ray analysis according to the present invention, it is possible to selectively conduct a measuring operation using the focusing method and a measuring operation using the parallel beam method.